

Abstract Submitted
for the DNP21 Meeting of
USB Dept. of Physics and Astronomy

Sorting Category: (Experimental)

Photoproduction of Λ^* Resonances Using the CLAS Detector UTSAV SHRESTHA, KYUNGSEON JOO, University of Connecticut — Much is known about the photoproduction of the hyperon resonances $\Lambda(1405)1/2^-$ and $\Lambda(1520)3/2^-$, but little is known about photoproduction to the higher-mass resonances $\Lambda(1670)1/2^-$ and $\Lambda(1690)3/2^-$. Both pairs of resonances are spin-orbit partners and are rated as 4-star (well-known) by the Particle Data Group. In the quark model, the $\Lambda(1405)$ and $\Lambda(1520)$ resonances are assigned to the SU(3) singlet, where the $\Lambda(1670)$ and $\Lambda(1690)$ are assigned to the octet. Using photoproduction data from the CLAS detector at Jefferson Lab, the $\Lambda(1520)$ has been studied using two exclusive channels, $\Sigma^+\pi^-$ and $\Sigma^-\pi^+$, from the detected K^+ , π^+ , and π^- particles. The higher mass resonances, $\Lambda(1670)$ and $\Lambda(1690)$ are studied for the first time using photoproduction.

☒ Prefer Oral Session
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Date submitted: June 29, 2021

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